Virginia Title V Operating Permit

Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9 VAC 5-80-50 through 9 VAC 5-80-300 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name: Hercules Incorporated

Facility Name: Hercules Incorporated Facility Location: 27123 Shady Brook Trail

Courtland, Virginia 23837-2034

Registration Number: 60188 Permit Number: VA-60188

November 18, 2002 Effective Date

November 18, 2007 Expiration Date

Robert G. Burnley Director, Department of Environmental Quality

November 18, 2002 Signature Date

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I. Facility Information

Permittee

Hercules Incorporated Hercules Plaza Wilmington, Delaware 19894

Responsible Official

Mr. Walter C. Crenshaw Plant Manager

Facility

Hercules Incorporated 27123 Shady Brook Trail Courtland, Virginia 23837-2034

Contact Person

Mr. Stephen Spence Environmental Supervisor (757)-562-3121 Ext. 112

AIRS Identification Number: 51-175-00012

Facility Description:

SIC Code 2899 – Chemicals and Chemical Preparations, Not Elsewhere Classified.

The production process is called the Aquapel® process that is a batch process, converting fatty acids to an alkyne ketene dimer, which is sold to the fine paper industry as a sizing agent.

Wastewater from the Aquapel® process is treated by the Wastewater Neutralization process.

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II. Emission Units

The following naming system was used to identify emission units, stacks/vents, and control equipment associated with each process. Two letters are used to identify each process: AQ for Aquapel® process, and WW for Wastewater Neutralization process. A third letter "E", "S", or "C" denotes an emission group, a stack/vent, or a control device, respectively. The next two numbers are consecutive numbers used for each category to indicate a unit or a group of units with common function. For example AQE01 represents the emission group in the first step of the Aquapel® process. Each emission unit in AQE01 is identified by its own equipment ID number. Stack/vents and control devices are always individual units, e.g. AQS01 and AQC01 are stack 01 and control device 01, respectively, hence, no further identification is necessary. Each stack/vent or control device may serve several emission groups. For example, AQC01 controls emissions from AQE02 to AQE08 with the common vent AQS01, while AQC02 and AQC03 (in series) control emissions from AQE12 to AQE18 (except tanks A-33 and A-89B) with the common vent AQS02. Equipment to be operated consists of:

Emission group/ Unit ID	Stack/ Vent ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Aquapel® Process							
AQE01/	N/A	Raw material and scrubber storage tanks	-	N/A	N/A	N/A	May 17, 2002
To-be-installed		Fatty acid tank	$75 \text{ m}^3 \text{ to } < 151 \text{ m}^3$	N/A	N/A	N/A	May 17, 2002
A-18	N/A	Fatty acid tank, 1990	$75 \text{ m}^3 \text{ to } < 151 \text{ m}^3$	N/A	N/A	N/A	N/A
A-19	N/A	Fatty acid tank, 1991	$75 \text{ m}^3 \text{ to } < 151 \text{ m}^3$	N/A	N/A	N/A	N/A
AQE02/	AQS01	Reactant storage tanks	-	Packed scrubber	AQC01	90 % control of Non-VOC HAP	May 17, 2002
To-be-installed	-	Reactant tank	-	-	-	-	May 17, 2002
AQE03/	AQS01	Reactors	-	Packed scrubber	AQC01	90 % control of Non-VOC HAP	May 17, 2002
R-110 & R-111	-	Two reactors, 1997	-	-	-	-	May 17, 2002

Emission group/ Unit ID	Stack/ Vent ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
AQE04/	AQS01	Process tanks	-	Packed scrubber	AQC01	90 % control of Non-VOC HAP	May 17, 2002
T-112, T-113, T- 114, & T-115	-	Four process tanks, 1990- 1991	-	-	-	-	N/A
AQE05/	AQS01	Process tanks	-	Packed scrubber	AQC01	90 % control of Non-VOC HAP	May 17, 2002
T-118	-	Process tank, 1997	-	-	-	-	May 17, 2002
T-119	-	Process tank, 1999	-	-	-	-	May 17, 2002
T-116 & T-117	-	Two process tanks, 1990	-	-	-	-	N/A
AQE06/	AQS01	Stripper system	-	Packed scrubber	AQC01	90 % control of Non-VOC HAP	May 17, 2002
T-100	-	Aqueous solution tank, 1990	-	-	-	-	N/A
C-203	-	Stripper, 1994	-	-	-	-	N/A
C-213	-	Stripper, 1997	-	-	-	-	N/A
A-31	-	Recovered material tank, 1995	-	-	-	-	N/A
AQE07/	AQS01	Liquid handling basin	-	Packed scrubber	AQC01	90 % control of Non-VOC HAP	May 17, 2002
CIRCUL	-	Aqueous solution tank, 1985	-	-	-	-	N/A

Emission group/ Unit ID	Stack/ Vent ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
AQE08/	AQS01	By-product recovery and storage system	-	Packed scrubber	AQC01	90 % control of Non-VOC HAP	May 17, 2002
T-108-6	-	Aqueous solution tank, 1998	40 to <75 m3	-	-	-	May 17, 2002
A-12	-	By-product tank, 1991	40 to <75 m3	-	-	-	N/A
A-13	-	By-product tank, 1991	40 to <75 m3	-	-	-	N/A
T-108-1	-	By-product tank, 1990	40 to <75 m3	-	-	-	N/A
A-29	-	By-product tank, 1993	40 to <75 m3	-	-	-	N/A
IRVIN	-	By-product tank, 1985	-	-	-	-	N/A
T-108-3	-	By-product tank, 1990	40 to <75 m3	-	-	-	N/A
T-108-5	-	Aqueous solution tank, 1997	-	-	-	-	May 17, 2002
T-108-6A	-	North Adsorber, 1994	-	-	-	-	N/A
T-108-6B	-	East Adsorber, 1985	-	-	-	-	N/A
T-108-6C	-	East Adsorber, 1985	-	-	-	-	N/A
AQE09/	N/A	Neutralization system	-	N/A	N/A	N/A	May 27, 2002
A-21	N/A	Water/Fatty acid crude, 1993	-	N/A	N/A	N/A	N/A
A-23	N/A	Water/Fatty acid crude, 2001	-	N/A	N/A	N/A	May 27, 2002
T-104-1	N/A	Neutralization Tank, 1997	-	N/A	N/A	N/A	May 27, 2002
NEUTRAL	N/A	Aqueous solution tank, 1990	-	N/A	N/A	N/A	N/A
AQE10/	N/A	VOC storage tanks	-	N/A	N/A	N/A	May 17, 2002
A-6	N/A	VOC storage tank, 1991	-	N/A	N/A	N/A	N/A
A-7	N/A	VOC storage tank, 1994	-	N/A	N/A	N/A	N/A
A-8	N/A	VOC storage tank, 1995	-	N/A	N/A	N/A	N/A
A-49	N/A	VOC storage tank, 1965	-	N/A	N/A	N/A	N/A

Emission group/ Unit ID	Stack/ Vent ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
AQE11/	N/A	VOC storage tanks	-	N/A	N/A	N/A	May 17, 2002
A-16	N/A	VOC storage tank, 2001	-	N/A	N/A	N/A	N/A
A-17	N/A	VOC storage tank, 1994	-	N/A	N/A	N/A	N/A
A-5	N/A	VOC storage tank, 1991	-	N/A	N/A	N/A	N/A
AQE12/	AQS02	Reactors	-	Condenser and Carbon Adsorber in series	AQC02 and AQC03	95% control of VOC	May 17, 2002
R-41	-	Reactor, 1990	-	-	-	-	N/A
R-40	-	Reactor, 1997	-	-	-	-	May 17, 2002
A-33 ⁽¹⁾	-	Stripped fatty acid tank, 1965	-	N/A	N/A	N/A	N/A
AQE13/	AQS02	Centrifuge system	-	Condenser and Carbon Adsorber in series	AQC02 and AQC03	95% control of VOC	May 17, 2002
S-403-1	-	Small centrifuge, 1988	-	-	-	-	N/A
S-413-1	-	Large centrifuge, 1998	-	-	-	-	May 17, 2002
T-412-1	-	Centrifuge feed tank, 1989	-	-	-	-	N/A
AQE14/	AQS02	Still system	-	Condenser and Carbon Adsorber in series	AQC02 and AQC03	95% control of VOC	May 17, 2002
T-42	_	Crude product tank, 1990	-	-	_	-	N/A
A-45	_	Crude product tank, 1966	-	-	-	-	N/A
A-53	-	Mixed solvent tank, 1965	-	-	-	-	N/A
C-608-1	-	Still jets, 2000	-	-	-	-	May 17, 2002
S-611-2	-	Separator, 1990	-	-	-	-	N/A
S-614-2	-	Separator, 1990	-	-	-	-	N/A
S-620-2	_	Separator, 1996	-	-	-	-	N/A

Emission group/ Unit ID	Stack/ Vent ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
AQE15/	AQS02	Recovery tanks	-	Condenser and Carbon Adsorber in series	AQC02 and AQC03	95% control of VOC	May 17, 2002
A-43	-	Recovery tank, 1990	-	-	_	-	N/A
A-44	-	Recovery tank, 1978	-	-	-	-	N/A
A-80 & A-81	-	Recovery tanks, 1979	-	-	-	-	N/A
T-503-1	-	Recovery tank, 1997	-	-	-	-	May 17, 2002
AQE16 = AQC02	AQS02 & AQS04	Condenser, 1990	-	Carbon Adsorber, January 1996	AQC03	95% control of VOC	May 17, 2002
AQE17/	AQS02	Batch still system	-	Condenser and Carbon Adsorber in series	AQC02 and AQC03	95% control of VOC	May 17, 2002
A-79	-	VOC tank, 1991	-	-	-	-	N/A
A-84	-	VOC tank, 1991	-	-	-	-	N/A
A-83	-	Overhead water tank, 1991	-	-	-	-	N/A
A-85	-	Scrap tank, 1991	-	-	-	-	N/A
A-86 & A-86A	-	Two VOC tanks, 1981	-	-	-	-	N/A
A-88	-	Overflow tank, 1965	-	-	-	-	N/A
A-90	-	Batch still, 1965	-	-	-	-	N/A
AQE18/	AQS02	VOC stripper system	-	Condenser and Carbon Adsorber in series	AQC02 and AQC03	95% control of VOC	May 17, 2002
A-87A	-	VOC tank, 1998	40 to <75 m3	-	_	-	May 17, 2002
A-87	_	VOC tank, 1981	-	-	_	-	N/A
A-89	-	Still bottoms, 2000	-	-	-	-	May 17, 2002
S-513-8	-	VOC stripper, 1990	-	-	-	-	N/A
S-510-2	-	Distillate separator, 1965	-	-	-	-	N/A
$A-89B^{(1)}$	-	Still bottom tank, 1997	-	N/A	N/A	N/A	May 17, 2002

Emission group/ Unit ID	Stack/ Vent ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
AQE19/	AQS03	Pelletizer system	-	N/A	N/A	N/A	May 17, 2002
T-717-1	-	Dowfrost refrigerated water tank, 1996	-	N/A	N/A	N/A	N/A
T-103	-	Dowfrost refrigerated water tank, 1966	-	N/A	N/A	N/A	N/A
Pelletizer 1 & Pelletizer 2	-	Two pelletizers, 1997	-	N/A	N/A	N/A	May 17, 2002
T-65-1	-	Pelletizer feed tank, 1996	-	N/A	N/A	N/A	May 17, 2002
	Wastewater Neutralization Process						l NY/A
WWE10/	N/A	Combined Basin, 1955	-	N/A	N/A	N/A	N/A
WWE11/	N/A	Wastewater neutralization tanks	-				
T-702	N/A	Tank, 1998	-	N/A	N/A	N/A	N/A
T-703	N/A	Tank, 1994	-	N/A	N/A	N/A	N/A
T-704	N/A	Tank, 1996	$75 \text{ m}^3 \text{ to } < 151 \text{ m}^3$	N/A	N/A	N/A	N/A

^{*}The Size/Rated capacity and PCD efficiency is provided for informational purposes only, and is not an applicable requirement.

⁽¹⁾ The tank is not connected to AQC02 and AQC03.

III. Aquapel® Process Equipment Requirements – (Emission groups AQE01 to 19)

A. Limitations

1. Emissions from the units in the Aquapel® emission groups AQE02 to AQE08 shall be controlled by a packed scrubber (PCD ID No. AQC01).

The maximum concentration of the non-VOC HAP in the water feed to the scrubber shall not exceed four percent (4%) by weight.

The flow rate of water feed to the scrubber shall not be lower than 50 gallons per minute.

The packed scrubber shall be provided with adequate access for inspection.

(9 VAC 5-80-110, and Condition 3 of 5/17/02 Permit)

2. Volatile organic compound emissions from the Aquapel® emission groups AQE12 to AQE18 shall be controlled by a condenser (PDC ID No. AQC02) and a carbon adsorber (PDC ID No. AQC03) in series.

The condenser shall be operated at a temperature of = 36° F.

The carbon adsorber shall be regenerated by steam every consecutive twelve (12) hours.

The maximum concentration of volatile organic compounds from the carbon adsorber vent (AQS02) shall not exceed 50,000 ppmv measured by a Gas Chromatography Instrument. The instrument detector shall be suitable for the analysis of target VOC compounds, properly calibrated and corrected, using manufacturer-supplied correction factors. The list of target VOC compounds shall be approved by the Director, Tidewater Regional Office.

The condenser and carbon adsorber shall be provided with adequate access for inspection.

(9 VAC 5-80-110, and Condition 5 of 5/17/02 Permit)

3. The annual usage of fatty acid in the Aquapel® process shall not exceed 48.6 million pounds, calculated monthly as the sum of each consecutive 12- month period. (9 VAC 5-80-110, and Condition 10 of 05/17/02 Permit)

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4. Point emissions from the packed scrubber outlet (PDC ID No. AQC01, Vent ID No. AQS01) shall not exceed the limits specified below:

Hazardous Air Pollutant (non-VOC) 0.4 lbs/hr 1.9 tons/yr

(9 VAC 5-80-110, and Condition 11 of 5/17/02 Permit)

5. Point emissions from the condenser/carbon adsorber outlet of the Aquapel® process (PDC ID No. AQC02 and AQC03, Vent ID No. AQS02) shall not exceed the limits specified below:

Volatile Organic Compounds 2.2 lbs/hr 9.7 tons/yr

Hazardous Air Pollutants (as VOCs) 2.2 lbs/hr 9.7 tons/yr

(9 VAC 5-80-110, and Condition 12 of 5/17/02 Permit)

6. Total emissions (points and fugitive sources) from the operation of the Aquapel® process shall not exceed the limits specified below:

Volatile Organic Compounds	32.6 lbs/hr	142.9 tons/yr
Hazardous Air Pollutant (Non-VOC)	2.3 lbs/hr	10.3 tons/yr
Hazardous Air Pollutants (as VOCs)	32.4 lbs/hr	142.1 tons/yr
Total Hazardous Air Pollutants	34.7 lbs/hr	152.7 tons/yr

(9 VAC 5-80-110, and Condition 13 of 5/17/02 Permit)

- 7. This permit to install and modify equipment for the Aquapel® process shall become invalid, unless an extension is granted by the DEQ, if:
 - a. A program of continuous installation/modification is not commenced before the latest of the following:
 - i. 18 months from the date of the NSR permit (5/17/02);
 - ii. Nine months from the date that the last permit or other authorization was issued from any other governmental agency;
 - iii. Nine months from the date of the last resolution of any litigation concerning any such permits or authorization; or

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b. A program of installation/modification is discontinued for a period of 18 months or more, or is not completed within a reasonable time, except for a DEQ approved period between phases of a phased construction project.

(9 VAC 5-80-110, Condition 16 of 5/17/02 Permit)

B. Monitoring and Recordkeeping

1. The packed scrubber (PCD ID No. AQC01) shall be equipped with a flow meter with a low flow alarm, and a method to adjust the non-VOC HAP concentration in the water entering the scrubber.

The flow rate shall be continuously measured (in gallons per minute) and recorded. When the flow rate drops below 50 gallons per minute, the alarm is triggered and the reaction process shall be suspended until the minimum flow rate of 50 gallons per minute is achieved.

Each monitoring device shall be installed, maintained, calibrated, and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations.

Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the packed scrubber (AQC01) is operating.

(9 VAC 5-80-110, and Condition 4 of 5/17/02 Permit)

- 2. The permittee shall sample the water feed to the packed scrubber (Unit Ref. No. AQC01) at least twice a calendar week to analyze for percent by weight of the non-VOC HAP.
 - (9 VAC 5-80-110 E, and Condition 4 of 5/17/02 Permit)
- 3. The condenser (Unit Ref. No. AQC02) shall be equipped with a temperature measuring device with a high temperature alarm at the brine inlet to continuously monitor and record the operating temperature of the counter-current flow condenser.

If the operating temperature of the condenser increases to above 36°F, the alarm is triggered and the permittee shall take corrective action by manually reducing the regeneration cycle time of the carbon adsorber to ensure that the required combined control efficiency is achieved. If the condenser temperature cannot be lowered to = 36°F within 4 hours, the process areas AQE12-AQE18 (except for two tanks, Unit Ref. No. A-33 and A-89B, respectively) shall be suspended until the problem can be corrected.

Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations.

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Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the condenser/ carbon adsorber system (Unit Ref. No. AQC02 and AQC03) is operating.

- (9 VAC 5-80-110 E, and Condition 6 of 5/17/02 permit)
- 4. The regeneration cycle of the carbon adsorber (Unit ref. No. AQC03) shall be recorded.
 - (9 VAC 5-80-110 E, and Condition 6 of 5/17/02 permit)
- 5. The permittee shall determine the concentration of volatile organic compounds in ppmv at the carbon adsorber vent (Unit Ref. No. AQS02) at least once quarterly by a Gas Chromatography Instrument. The instrument detector shall be suitable for the analysis of target VOC compounds, properly calibrated and corrected, using manufacturer-supplied correction factors. The list of target VOC compounds shall be approved by the Director, Tidewater Regional Office.

 (9 VAC 5-80-110 E, and Condition 6 of 5/17/02 permit)
- 6. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Tidewater Regional Office. These records shall include, but are not limited to:
 - a. The annual usage of fatty acid in the Aquapel® process, calculated monthly as the sum of each consecutive twelve (12)-month period.
 - b. Flow rate monitoring records for the water feed to the packed scrubber (Unit Ref. No. AQC01).
 - c. Analysis results of the non-VOC HAP concentration (% by weight) in the water feed to the packed scrubber (Unit Ref. No. AQC01).
 - d. Temperature monitoring records for the brine inlet to the condenser (Unit Ref. No. AQC02).
 - e. Records of recycling cycles of the carbon adsorber (Unit Ref. No. AQC03).
 - f. Analysis records of the volatile organic compound concentration emitted from the carbon adsorber vent (Stack Ref. No. AQS02).
 - g. The annual point emissions for volatile organic compounds, and hazardous air pollutants (as VOCs and non-VOC) as limited in Conditions III.A.4 and 5, calculated monthly as the sum of each consecutive 12-month period.

- h. Annual point and fugitive emissions for volatile organic compounds, and hazardous air pollutants (as VOCs and non-VOC) as limited in Condition III.A.6, calculated monthly as the sum of each consecutive 12-month period.
- i. Scheduled and unscheduled maintenance.

These records shall be available at the facility for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-80-110, and Condition 15 of 5/17/02 Permit)

- 7. The owner or operator of each storage vessel as specified in 40 CFR 60.110 b (a) shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept for the life of the vessel. This condition is applicable to the following tanks:
 - In emission group AQE01: Tanks A-18, A-19, and the to-be-installed fatty acid tank.
 - In emission group AQE08: Tanks A-12, A-13, A-29, T-108-1, T108-3 and T108-6.
 - In emission group AQE18: Tank A-87 A.

(9 VAC 5-50-410, 40 CFR 60 Subpart Kb, and Condition 15 of 5/17/02 Permit)

8. The permittee shall maintain a record of the volatile organic liquid (VOL) stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period for AQE01 vessels listed in Condition III.B.7 whenever the content is changed to a VOL with a maximum true vapor pressure greater than or equal to 15.0 kPa.

(9 VAC 5-50-410, 40 CFR 60.116 b (c))

C. Testing

- 1. The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.
 - (9 VAC 5-80-110, and Condition 9 of 05/17/02 Permit)
- 2. If testing to demonstrate compliance is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)	
VOC	EPA Methods 18, 25, 25a	
VOC Content	EPA Methods 24, 24a	

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D. Reporting

- 1. The permittee shall furnish written notification to the Director, Tidewater Regional Office:
 - a. The actual date on which installation of the equipment permitted for the Aquapel® process commenced within 10 days after such date.
 - b. The actual start-up date of the installed equipment for the Aquapel® process within 10 days after such date.

(9 VAC 5-80-110 F, and Condition 14 of 5/17/02 permit)

- 2. The permittee shall include the following in the semi-annual monitoring reports submitted to the Director, Tidewater Regional Office, as required under General Conditions, Condition number VII.C.3:
 - a. A copy of the twice weekly test results on the non-VOC HAP concentration (% by weight) in the water feed to the packed scrubber.
 - b. A copy of the quarterly analysis results on the volatile organic compound concentration emitted from the condenser/carbon adsorber vent (AQS02).

(9 VAC 5-80-110 F)

Hercules Incorporated Permit Number: VA-60188 Page 16 of 32

IV. Wastewater Treatment Operation Equipment Requirements – (Emission units WWE10 to WWE11)

A. Recordkeeping

1. The owner or operator of each storage vessel as specified in 40 CFR 60.110 b (a) shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept for the life of the vessel. This condition is applicable to tank T-704 in emission group WWE11.

(9VAC 5-50-410, and 40 CFR 60 Subpart Kb)

2. The permittee shall maintain a record of the volatile organic liquid (VOL) stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period for any of the vessels listed in Condition IV.A.1 whenever the content is changed to a VOL with a maximum true vapor pressure greater than or equal to 15.0 kPa.

(9 VAC 5-50-410, 40 CFR 60.116 b (c))

V. Insignificant Emission Units

The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission	Emission Unit		Pollutant(s)			
Unit No.	Description	Citation	Emitted			
Aquapel® pi	•					
quarpero p						
AQE01/						
A-3, A-4, &	Three fatty acid tanks,	9 VAC 5-80-720 B 2	VOC			
A-15	1965	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
T-501-1A &	Two by-product storage	9 VAC 5-80-720 B 5	Non-VOC HAP			
T-501-1B	tanks, 1993	9 VAC 3-80-720 D 3	Non-voc hap			
AQE02/						
A-1	Reactant tank, 1965	9 VAC 5-80-720 B 5	Non-VOC HAP			
A-1A	Reactant tank, 1989	9 VAC 5-80-720 B 5	Non-VOC HAP			
A-0	Reactant tank, 1994	9 VAC 5-80-720 B 5	Non-VOC HAP			
AQE08/						
A-10 & A-	Two by-product tanks,					
11	1991	9 VAC 5-80-720-B 2	VOC			
A-25	Dilution water tank, 1994	0 VA C 5 00 720 D 2	VOC			
A-26	Aqueous solution tank,	9 VAC 5-80-720-B 2	VOC			
A-20	1995	9 VAC 5-80-720-B 5	Non-VOC HAP			
T-707-1	Hot water tank, 1987	9 VAC 5-80-720-A 42	None			
AQE09/	1100 ((4001 000111, 170)	y 1110 0 00 720 11 12	11010			
A-2	Caustic solution tank,	9 VAC 5-80-720-A 42	None			
	2001					
AQE19/						
A-63	Rework tank, 1966	9 VAC 5-80-720-B 5	VOC HAP			
A-61 & A-	Two product tanks, 1966	9 VAC 5-80-720-B 5	VOC HAP			
62						
Western New York Protein December 1						
vvastewater 1	Wastewater Neutralization Process					
No insignificant units identified						
Facility-wide						
	Warehousing/storage/off	9 VAC 5-80-720 A	All criteria			
Unassigned	ices	and 9 VAC 5-80-720 B	pollutants			

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These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

VI. Permit Shield & Inapplicable Requirements

Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of Applicability
60 CFR 60 Subpart III	NSPS for VOC Emissions from the Synthetic Organic Chemical Manufacturing Industry (SOMCI) Air Oxidation Unit Processes.	SOCMI emission units that meet the definition of "air oxidation process" in 40 CFR 60.611.
40 CFR 60 Subpart NNN	NSPS for VOC Emissions from SOCMI Distillation Operations.	SOCMI distillation processes that was in existence on December 20, 1983, and produces chemicals listed in 40 CFR 60.667.
40 CFR 60 Subpart RRR	NSPS for VOC Emissions from SOCMI Reactor Processes.	SOCMI reactor processes that produce chemicals listed in 40 CFR 60.707.
40 CFR 63 Subparts F, G, H, and I	Hazardous Organic NESHAP (HON) MACT.	SOCMI major HAP sources that meet the criteria of 40 CFR 63.100 (b)(1) to (3).
40 CFR 63 Subpart Q	Cooling Tower MACT.	Facilities that had previously used chromium-based water treatment chemicals in the cooling towers.
9 VAC 5-40-3410 et seq. (Rule 4-25)	Emission Standards For Volatile Organic Compound Storage and Transfer Operations.	Facilities located in a VOC control area (9 VAC 5-20-206).

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law. (9 VAC 5-80-140)

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VII. General Conditions

A. Federal Enforceability

All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as state-only enforceable.

(9 VAC 5-80-110 N)

B. Permit Expiration

This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete renewal application to the Department consistent with 9 VAC 5-80-80, the right of the facility to operate shall be terminated upon permit expiration.

- 1. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.
- 2. If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.
- 3. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.
- 4. If an applicant submits a timely and complete application under section 9 VAC 5-80-80 for a permit renewal, but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied, and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.
- 5. The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant to section 9 VAC 5-80-80 D, the applicant fails to submit, by the deadline specified in writing by the Board, any additional information identified as being needed to process the application.

(9 VAC 5-80-80 B, C and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)

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C. Recordkeeping and Reporting

- 1. All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:
 - a. The date, place as defined in the permit, and time of sampling or measurements.
 - b. The date(s) analyses were performed.
 - c. The company or entity that performed the analyses.
 - d. The analytical techniques or methods used.
 - e. The results of such analyses.
 - f. The operating conditions existing at the time of sampling or measurement.
 - (9 VAC 5-80-110 F)
- Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
 (9 VAC 5-80-110 F)
- 3. The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ. Reports shall cover a period of six months. The first reporting period shall commence the first day of the second month following permit issuance. The reporting periods shall be from the first day of the month to the last day of the sixth month. Reports shall be postmarked or delivered no later than 60 days following the end of the reporting period. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:
 - a. The time period included in the report.
 - b. All deviations from permit requirements. Malfunctions that constitute deviations do not need to be reported if they are resolved by correcting the malfunction or shutting the process down within 1 hour of discovery. For purposes of this permit, deviations include, but are not limited to:
 - (1) Exceedance of emissions limitations or operational restrictions;

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(2) Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or compliance assurance monitoring which indicates an exceedance of emission limitations or operational restrictions; or,

- (3) Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.
- c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that "no deviations from permit requirements occurred during this semi-annual reporting period".

(9 VAC 5-80-110 F)

D. Annual Compliance Certification

Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices for a period of twelve months. The reporting periods shall coincide with the monitoring reporting periods. The report shall be postmarked or delivered no later than 60 days following the end of the twelve-month period. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

- 1. The time period included in the certification.
- 2. The identification of each term or condition of the permit that is the basis of the certification.
- 3. The compliance status.
- 4. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.
- 5. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period.
- 6. Such other facts as the permit may require to determine the compliance status of the source.

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One copy of the annual compliance certification shall be sent to EPA at the following address:

Clean Air Act Title V Compliance Certification (3AP00) U. S. Environmental Protection Agency, Region III 1650 Arch Street Philadelphia, PA 19103-2029.

(9 VAC 5-80-110 K.5)

E. Permit Deviation Reporting

The permittee shall notify the Director, Tidewater Regional Office, within four daytime business hours of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the occurrence, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to General Conditions, Condition VII.C.3 of this permit. (9 VAC 5-80-110 F.2 and 9 VAC 5-80-250)

F. Failure/Malfunction Reporting

In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours, notify the Director, Tidewater Regional Office by facsimile transmission, telephone or telegraph of such failure or malfunction and shall within two weeks provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Director, Tidewater Regional Office (9 VAC 5-20-180 C)

G. Severability

The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.

(9 VAC 5-80-110 G.1)

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H. Duty to Comply

The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.

(9 VAC 5-80-110 G.2)

I. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(9 VAC 5-80-110 G.3)

J. Permit Action for Cause

- 1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause as specified in 9 VAC 5-80-110 L, 9 VAC 5-80-240 and 9 VAC 5-80-260. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

 (9 VAC 5-80-110 G.4)
- 2. Such changes that may require a permit modification and/or revisions include, but are not limited to, the following:
 - a. Erection, fabrication, installation, addition, or modification of an emissions unit (which is the source, or part of it, which emits or has the potential to emit any regulated air pollutant), or of a source, where there is, or there is potential of, a resulting emissions increase;
 - b. Reconstruction or replacement of any emissions unit or components thereof such that its capital cost exceeds 50% of the cost of a whole new unit;
 - c. Any change at a source which causes emission of a pollutant not previously emitted, an increase in emissions, production, throughput, hours of operation, or fuel use greater than those allowed by the permit, or by 9 VAC 5-80-11, unless such an increase in authorized by an emissions cap; or any change at a source which causes an increase in emissions resulting from a reduction in control efficiency, unless such an increase is authorized by an emissions cap;

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- d. Any reduction of the height of a stack or of a point of emissions, or the addition of any obstruction which hinders the vertical motion of exhaust;
- e. Any change at the source which affects its compliance with conditions in this permit, including conditions relating to monitoring, recordkeeping, and reporting;
- f. Addition of an emissions unit which qualifies as insignificant by emissions rate (9 VAC 5-80-720 B) or by size or production rate (9 VAC 5-80-720 C);
- g. Any change in insignificant activities, as defined by 9 VAC 5-80-90 D.1.a(1) and 9 VAC 5-80-720 B and 9 VAC 5-80-720 C.

(9 VAC 5-80-110 G, 9 VAC 5-80-110 J, 9 VAC 5-80-240, and 9 VAC 5-80-260)

K. Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege. (9 VAC 5-80-110 G.5)

L. Duty to Submit Information

- The permittee shall furnish to the Board, within a reasonable time, any information
 that the Board may request in writing to determine whether cause exists for
 modifying, revoking and reissuing, or terminating the permit or to determine
 compliance with the permit. Upon request, the permittee shall also furnish to the
 Board copies of records required to be kept by the permit and, for information
 claimed to be confidential, the permittee shall furnish such records to the Board along
 with a claim of confidentiality.
 (9 VAC 5-80-110 G.6)
- 2. Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G. (9 VAC 5-80-110 K.1)

M. Duty to Pay Permit Fees

The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-305 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-355. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the Department by **April 15** of each year. The calculations and final amount of emissions are subject to verification and final determination by the Department. (9 VAC 5-80-110 H and 9 VAC 5-80-340 C)

N. Fugitive Dust Emission Standards

During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

- 1. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;
- 2. Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;
- 3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or other similar operations;
- 4. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,
- 5. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9 VAC 5-40-90 and 9 VAC 5-50-90)

O. Startup, Shutdown, and Malfunction

At all times, including periods of startup, shutdown, soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(9 VAC 5-50-20)

P. Alternative Operating Scenarios

Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80, Article 1. (9 VAC 5-80-110 J)

Q. Inspection and Entry Requirements

The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

- 1. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.
- 2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.
- 3. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.
- 4. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(9 VAC 5-80-110 K.2)

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R. Reopening For Cause

The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80 F.

- 1. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
- 2. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
- 3. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D.

(9 VAC 5-80-110 L)

S. Permit Availability

Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request. (9 VAC 5-80-150 E)

T. Transfer of Permits

- 1. No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another. (9 VAC 5-80-160)
- 2. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-200. (9 VAC 5-80-160)

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3. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-200. (9 VAC 5-80-160)

U. Malfunction as an Affirmative Defense

- 1. A malfunction constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations if the conditions of paragraph 2 are met.
- 2. The affirmative defense of malfunction shall be demonstrated by the permittee through properly signed, contemporaneous operating logs, or other relevant evidence that show the following:
 - a. A malfunction occurred and the permittee can identify the cause or causes of the malfunction.
 - b. The permitted facility was at the time being properly operated.
 - c. During the period of malfunction, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit.
 - d. The permittee notified the board of the malfunction within two working days following the time when the emissions limitations were exceeded due to the malfunction. This notification shall include a description of the malfunction, any steps taken to mitigate emissions, and corrective actions taken. The notification may be delivered either orally or in writing. The notification may be delivered by electronic mail, facsimile transmission, telephone, telegraph, or any other method that allows the permittee to comply with the deadline. The notice fulfills the requirement of 9 VAC 5-80-110 F.2. b to report promptly deviations from permit requirements. This notification does not release the permittee from the malfunction reporting requirements under 9 VAC 5-20-180 C.
- 3. In any enforcement proceeding, the permittee seeking to establish the occurrence of a malfunction shall have the burden of proof. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any requirement applicable to the source.

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V. Permit Revocation or Termination for Cause

A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9 VAC 5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe, any permit for any of the grounds for revocation or termination or for any other violations of these regulations. (9 VAC 5-80-260)

W. Duty to Supplement or Correct Application

Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit. (9 VAC 5-80-80 E)

X. Stratospheric Ozone Protection

If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F. (40 CFR Part 82, Subparts A-F)

Y. Accidental Release Prevention

If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.

(40 CFR Part 68)

Z. Changes to Permits for Emissions Trading

No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit. (9 VAC 5-80-110 I)

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AA. Emissions Trading

Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

- 1. All terms and conditions required under 9 VAC 5-80-110, except subsection N, shall be included to determine compliance.
- 2. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.
- 3. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-50 through 9 VAC 5-80-300.

(9 VAC 5-80-110 I)

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VIII. State-Only Enforceable Requirements

The following terms and conditions are not required under the federal Clean Air Act or under any of its applicable federal requirements, and are not subject to the requirements of 9 VAC 5-80-290 concerning review of proposed permits by EPA and draft permits by affected states.

1. The facility is subject to the Emission Standards for Odor in 9 VAC 5-40-130 et seq. (Rule 4-2), and the Standards of Performance for Odorous Emissions in 9 VAC 5-50-130 et seq. (Rule 5-2).

(9 VAC 5-80-110 N and 9 VAC 5-80-300)